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An Introductory Review on Increasing the Survival of Probiotic Bacteria in Dairy Products Using Essential Oil

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Abstract

Increasing the survival of probiotic bacteria and improve the hygienic quality of dairy products using natural preservative agents is widely accepted today. It has long been recognized that some essential oils (EOs) have antimicrobial properties, so that they can be used as food flavoring agents, preservatives, also for medicinal purposes. However, to establish the usefulness of natural preservatives, they must be evaluated alone and in combination with other preservative factors (such as probiotic bacteria) to determine whether there are synergistic effects and to devise effective combinations. This study is a review on investigation of feasibility in using of EOs (including: Teucrium polium, Cumin, Allium ascalonicum Mentha longifolia, Ferula sharifi and Pimpinella anisum) in probiotic dairy products. In most of these research survival of *L.* casei decreased throughout the storage period. Nevertheless, probiotic dairy products and treatment containing medium concentration EOs had the highest viable count of probiotic bacteria. But the lowest concentration of these EOs was the most appropriate treatment in sensory assessment. Based on our review, dairy products such as yoghurt, cheese and dairy drinks can be a suitable food matrix to survive probiotic bacteria while certain herbal EOs is added.

Keywords: Essential oil, Herbal plants, Functional dairy products, Natural preservative